Observers' Notes:—

(*a*), (*b*) Very faint, but observations fair. (*c*) Very faint at times; observation fair on the whole. (*d*) Nucleus sometimes showed as a bright point, but generally not well defined, and would scarcely stand any illumination of field. Observation, though difficult, very fair. (*e*) Observation good. (*f*) Observation considered very good. Nucleus very sharp at times. (*g*) Difficult, but considered fairly good. Nucleus faint at times. (*h*) Faint. Observation good. (*i*) Observation only approximate. Sky cloudy. (*j*) R.A. good. N.P.D. very rough from a single bisection when extremely faint.

General Notes (*a*) to (*j*).—In the telescope, the light of the head on the night of May 18, the nucleus being better defined than on any other night when the observations were made by me, was certainly not brighter than an eighth magnitude star (W.)

Brightness = Eight in star-magnitude (R.) May 21 and 22, cloudy.

(*k*) Difficult observation, but considered fairly good. Clouds passing. $7\frac{1}{2}$ star-magnitude.

(*l*) The comet was as bright as a 7 or $7\frac{1}{2}$ magnitude star, but cloud prevailed nearly the whole time of the transit: only one bisection made.

(*m*) Observation pretty good. As bright (in telescope) as a 7–6 mag. star.

(*n*) Observation very satisfactory. Nucleus a bright point equal to $6\frac{1}{3}$ star-magnitude.

(*o*) Observation good. Brightness in star-magnitude = 6–5. *Note*.—May 29, 13^h. The comet and tail are both visible with the naked eye.

(*p*) Very good observation. Brightness in telescope = $4\frac{1}{2}$ mag. Note at $10\frac{1}{2}^h$.—Compared comet with stars near for magnitude, and found it (to the naked eye) identical in brightness with δ Persei = 3rd magnitude. Observers—W. = Mr. Wickham. R. = Mr. Robinson. F.B. = Mr. F. Bellamy.

Observation of Comet a 1882. By L. G. Puckle, Esq.

(*Communicated by Capt. H. Toynbee, R.N.*)

On Friday, June 23, at $7^h\ 20^m$ P.M., the ship being in latitude 2° 30′ N., and longitude 104° 33′ E., we observed a large comet a little to the southward of the planet *Venus*.

The following angles were observed with a sextant:—

	°	′	″
Altitude of *Venus*	13	30	0
Altitude of nucleus of comet ...	12	0	0
Angle between nucleus and *Venus* ...	6	30	0

The nucleus was well defined and bright, like a star of the second magnitude, the tail spreading out like a fan to the extent of about two and a half degrees of altitude, as visible with the naked eye. The tail stretched upwards from the horizon, with a slight curve in it towards the southward, at the upper end.

The comet remained visible until it sank behind the clouds on the horizon. Careful search was made for it the next night, but without success. We did not see it again, even with the aid of a telescope.

On our arrival at Hong Kong on June 30 we made inquiries about it, but found that nobody had seen it or heard anything about it until we ourselves reported it.

The Solar Eclipse of 1882, *May* 17, *observed at Vizagapatam.* By A. V. Nursinga Row, Esq.

The partial eclipse of the Sun of 1882, May 17, was observed at the Observatory, Daba Gardens, Vizagapatam (Latitude 17° 42′ 9″ N., Longitude $5^h\ 33^m\ 32^s{\cdot}3$ E., according to the Trigonometrical Survey). There were no clouds, but the sky was hazy, and the Sun was surrounded by a halo during the whole time of the eclipse. The beginning of the eclipse was observed by observer Verabadroodoo at local sidereal time $4^h\ 25^m\ 17^s$; the end was observed by Mr. A. V. Juggarow at local sidereal time $6^h\ 57^m\ 21^s$.

On the Solution of Kepler's Problem. By Prof. Ch. V. Zenger.

The various modes of calculating the true anomaly by means of the mean anomaly and eccentricity of the planetary orbit considered by Mädler, Leverrier, and J. W. L. Glaisher, require a considerable amount of calculation, partly owing to the slow convergence of the series employed.

Writing

$$E - e \sin E = F = m\,(T - t),$$

where E denotes the true anomaly, e the eccentricity, m the mean anomaly, and T the time of perihelion, in the following manner—

$$E - F = e \sin E,$$

it becomes obvious, from the small amount of the eccentricity, that E—F will be always small, and the series will rapidly converge.

Now

$$E - F = \sin(E-F) + \frac{1}{6}\sin^3(E-F) + \frac{3}{40}\sin^5(E-F) + \frac{15}{336}\sin^7(E-F) + \text{ \&c.};$$

and we thus have

$$\frac{\sin(E-F)}{\sin E} = \frac{e}{1 + \frac{1}{6}\sin^2(E-F) + \frac{3}{40}\sin^4(E-F) + \frac{15}{336}\sin^6(E-F) + \ldots}$$